Trend Study 24-13-03

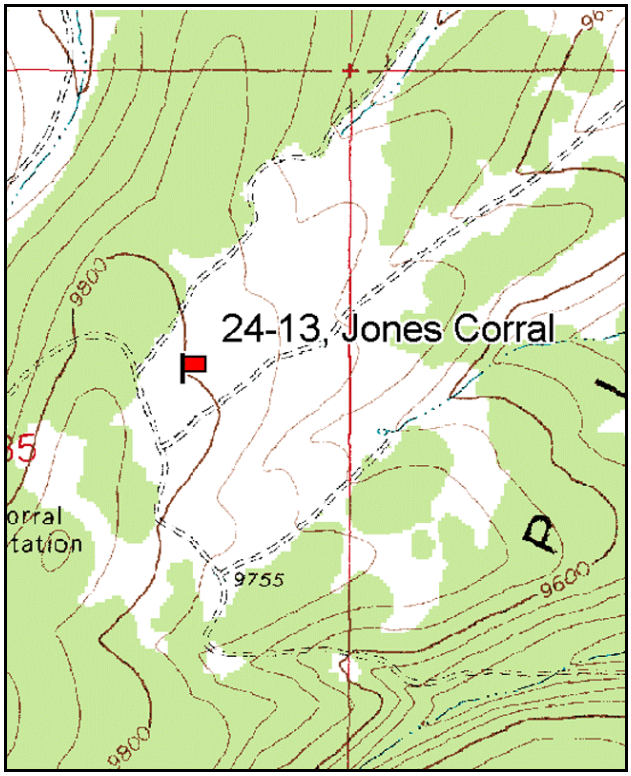
Study site name: Jones Corral . Vegetation type: Mountain Meadow .

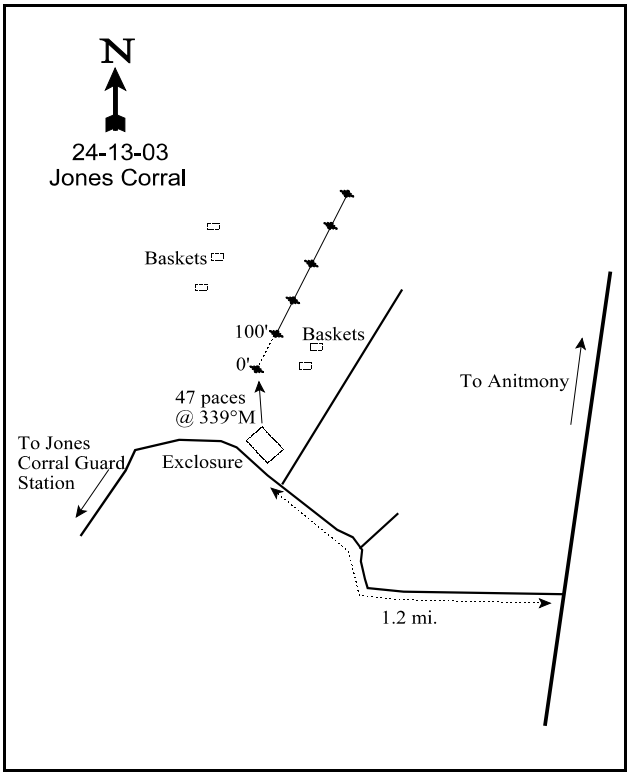
Compass bearing: frequency baseline ~40 degrees magnetic.

Frequency belt placement: line 1 (11ft), line 2 (34ft), line 3 (59ft), line 4 (71ft), line 5 (95ft).

LOCATION DESCRIPTION

From the town of Antimony, drive on Mt. Dutton road for approximately 10 miles towards the Jones Coral Guard Station to a fork. Turn right (west) and drive 1.2 miles towards the guard station. Stop at the exclosure on the right side of the road. From the northwest corner of the exclosure walk 47 paces at 339 degrees magnetic to the 0' stake. The 0' stake is marked by browse tag #162.





Map Name: Mt. Dutton

Diagrammatic Sketch

Township 31S , Range 3W , Section 35

GPS: NAD 27, UTM 12S 4214475 N, 398207 E

DISCUSSION

Jones Corral - Trend Study 24-13

This is a new trend study which samples a mountain meadow surrounded by aspen about ½ mile northeast of the Jones Corral Forest Service guard station. Elevation of the site is 9,800 feet with a north aspect and a gentle slope of 6%. The small Jones Corral exclosure is found about 200 feet to the southeast. This site replaces the Suicide trend study, 24-5, which was suspended in 2003. The Jones Corral site samples an area which receives heavy elk use, especially during the spring. Pellet group data from 2003 estimated 58 elk days use/acre (143 edu/ha). Deer use was low at only 3 days use/acre. The area is also grazed by cattle during the summer and use was estimated at 23 days use/acre (57 cdu/ha). Cattle pats appeared to be from the previous summer (2002). A long term grazing study was established on this area by the Division of Wildlife Resources in 1993 and continued until 2000 to quantify elk and cattle use. Pellet group data from that study estimated an 8 year average (1993-2000) of 53 elk days use/acre per year (131 edu/ha), mostly from spring use. Livestock use had an 8 year average of 40 days use/acre (99 cdu/ha). The highest use occurred between 1993 and 1998 with an average of 47 cow days use/acre (116 cdu/ha). Use by cattle declined to 16 days use/acre (40 cdu/ha) in 1999 and 23 (57 cdu/ha) in 2000.

Soil at the site is moderately deep with an effective rooting depth of nearly 13 inches. Parent material is basalt. Soil texture is a loam which is slightly acidic in reaction (pH 6.47). Organic matter is high at 3.4%. Phosphorous is low at only 7 ppm when 10 ppm is considered minimum for normal plant growth and development. Rock and pavement are abundant on the surface with a combined cover value of 22%. Some localized erosion is evident but it is not severe. There is considerable soil disturbance by gopher activity.

This area is summer range so shrubs are not the key aspect. The only shrubs found on the site are a very few mountain big sagebrush plants.

The herbaceous understory is diverse and abundant but composition and production are poor. Production estimates from the grazing study of this area estimated herbaceous production between 1,400 and 1,900 lbs/acre between 1995 and 1999, averaging 1,702 lbs/acre. Drought conditions in 2000, especially during the spring period (April-June), reduced herbaceous production to only 523 pounds/acre, a 3 fold decrease. Considering the elevation at this site, proximity to aspen, and site potential, herbaceous production should be much higher.

Perennial grasses provided about 21% cover in 2003 with smooth brome, Kentucky and Sandberg bluegrass, and subalpine and Letterman needlegrass providing nearly all of the grass cover. Of these species, Sandberg bluegrass was the most abundant, providing 45% of the total grass cover. Forbs produced nearly as much cover as grasses with forbs providing nearly 17% cover in 2003. However, composition was also poor with the most abundant species being low growing increasers such as rose pussytoes, Pacific aster, cinquefoil, and white clover. All of these species are increasers under heavy grazing pressure.

2003 APPARENT TREND ASSESSMENT

Soil conditions are marginal considering the elevation of this site. Protective ground cover is barely adequate to prevent severe erosion. There is no browse to speak of and this site is summer range so shrubs are not the key component. The herbaceous understory is diverse but composition is poor. Increaser grasses and forbs dominate the understory. Nearly all of the common perennial forbs are low growing and increasers under heavy grazing.

HERBACEOUS TRENDS --
Management unit 24 , Study no: 13

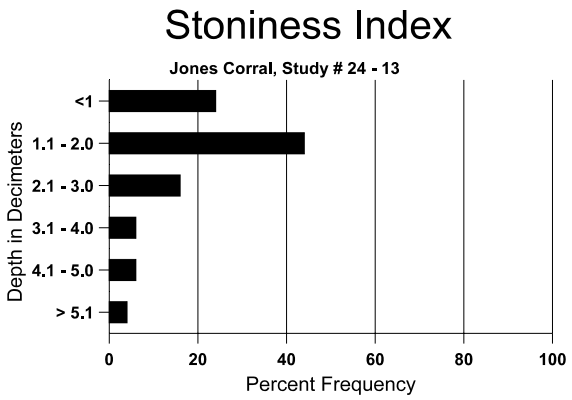
Type	Species	Nested Frequency '03	Average Cover % '03
G	Bromus inermis	113	3.07
G	Carex spp.	7	.06
G	Poa pratensis	72	2.66
G	Poa secunda	299	9.45
G	Sitanion hystrix	24	.60
G	Stipa columbiana	53	2.38
G	Stipa lettermani	100	2.44
G	Trisetum spicatum	26	.30
Total for Annual Grasses		0	0
Total for Perennial Grasses		694	20.98
Total for Grasses		694	20.98
F	Agoseris glauca	4	.01
F	Antennaria rosea	88	2.29
F	Aster chilensis	100	1.42
F	Astragalus spp.	92	3.06
F	Collinsia parviflora (a)	16	.05
F	Erigeron eatonii	27	.32
F	Erigeron pumilus	2	.01
F	Polygonum douglasii (a)	21	.09
F	Potentilla gracilis	70	1.59
F	Taraxacum officinale	3	.00
F	Trifolium repens	248	7.69
Total for Annual Forbs		37	0.14
Total for Perennial Forbs		634	16.43
Total for Forbs		671	16.56

BASIC COVER --
Management unit 24 , Study no: 13

Cover Type	Average Cover % '03
Vegetation	44.15
Rock	8.19
Pavement	13.68
Litter	12.75
Cryptogams	.99
Bare Ground	23.89

SOIL ANALYSIS DATA --
Management unit 24, Study no: 13, Study Name: Jones Corral

Effective rooting depth (in)	Temp °F (depth)	pH	%sand	%silt	%clay	%0M	PPM P	PPM K	dS/m
12.7	57.4 (13.2)	6.5	42.6	32.7	24.7	3.4	7.0	483.2	0.6



PELLET GROUP DATA --
Management unit 24 , Study no: 13

Type	Quadrat Frequency '03	Days use per acre (ha) '03
Rabbit	1	-
Elk	30	58 (144)
Deer	6	3 (7)
Cattle	5	23 (57)

BROWSE CHARACTERISTICS --
Management unit 24 , Study no: 13

		Age class distribution (plants per acre)					Utilization				
Year	Plants per Acre (excluding seedlings)	Seedling	Young	Mature	Decadent	Dead	% moderate	% heavy	% decadent	% poor vigor	Average Height Crown (in)
Artemisia tridentata vaseyana											
03	**0**	-	-	-	-	-	0	0	-	0	10/18